

## LONELINESS FOLLOWING CORONARY HEART DISEASES AMONG ADOLESCENCES

<sup>1</sup>NIGHAT GUL, <sup>2</sup>DR SHAGHUFTA PARVEEN, <sup>3</sup>DR SAJID MEHMOOD ALVI, <sup>4</sup>DR ASAF NIWAZ, <sup>5</sup>IFFAT GULAB, DR ASMA BATOOL

<sup>1</sup>lecturer Department of Psychology, The University of Haripur, Khaber Pakhtunkhwa, Pakistan

<sup>2</sup>Assistant Professor, Department of Psychology, The Hazara university Mansehra, Khyber Pakhtunkhwa, Pakistan.

<sup>3</sup>Asistant Professor Department of Psychology, The University of Haripur, khyber Pakhtunkhwa, Pakistan

<sup>4</sup>Associate Professor, Department of Education, The University of Haripur Khyber Pakhtunkhwa, Pakistan

Associate Professor, Department of Psychology, Postgraduate College for Women Haripur, Khyber Pakhtunkhwa, Pakistan

MBBS Doctor, Fatima Jinnah University Lahore, Pakistan

### ABSTRACT

The indent of the study was to measure the effect of loneliness on coronary artery heart disease among adolescences with regions and gender differences in cross sectional survey study. A cross sectional comparative study was conducted in district Haripur Pakistan and (N=200) participants' were selected purposefully. In door patients accessed to public and private hospitals of Haripur. The study was conducted from March 2014 to February 2015. University of California loss angles loneliness Urdu version 3 UCLA scale was used in present study (Gul, 2015). Mean age of target population was (M = 15.66, SD = 2.873) CAD patient's loneliness score was  $21.06 \pm 6.834$  higher than counterpart's patients. Mean scores of loneliness for male & female CAD adolescences were (M = 27.89, SD = 11.12; M = 35.00, SD = 14.0) respectively. Urban area residing adolescences CAD patients and non CAD patients' scores were (M = 44.39, SD = 8.892; M = 34.25 SD = 14.19) P<0. 001 correspondingly. Rural area residing adolescences CAD patients and non CAD patients' scores were (M=30.25, SD=14.19; M=30.94, SD= 7.759) respectively at (p<.001). CAD adolescences level of loneliness was higher and non CAD adolescences loneliness was lower. While CAD and non CAD patient's in difference in loneliness among adolescences in terms of gender and region.

**Key Words:** *Loneliness, adolescences, Risk factors, cardiograph problems, Purposive sampling.*

### INTRODUCTION

Through loneliness coronary heart diseases commonly faced by western developed countries, not to great extent in same alike Pakistan developing countries. Since ratio of coronary heart diseases in urban area residing Pakistani adolescences is growing. The development of modern science and technology has decreased the lifespan of the individuals, once hand and other hand making health problems much more complicated. The rural area adolescences, which less suffered by loneliness, is gradually breaking down the Coronary heart diseases. The emerging trend of urbanization is keeping the adolescences in a state of isolation. While with modernization of society adolescences are facing more medical, financial social and psychological problems. Loneliness is a continuing state of emotional state that start when a person feels alienated due to misunderstanding or redetection by others and there deficiency of social partners for social activities which required for communal integration and emotional autonomy (Rook et al., 2010 & Barrett et al., 1995).

Loneliness before has been associated with higher blood pressure, depression, Alzheimer's disease and dementia hence it is effecting the cardiac problems and stroke has remained ambiguous (Xia & Li, 2018). University of York in United Kingdom, conducted 23 different studies on 180,000 population 31% risk factor of stock was loneliness. In general lack of social communication of people with each other is 29 % cause root of heart diseases. Loneliness as a risk factor was cause of heart diseases and stroke (Nekioul et al., 20).<sup>5</sup>

Coronary heart disease is more essential issue of the modern age 2 million Iranian suffering by the (CHD). Most common risk factors were the isolation, depression, anxiety and stress. Social support and loneliness were the chief cause of (CHD) in different age groups in different countries (Borys & Perlman, 1995).

Study found gender difference in influence of loneliness on heart diseases in same circumstances and conditions. It was declared by study male more infectious by Coronary heart diseases than females (Ahmed, 2015). Cross comparison of loneliness between Rawalpindi urban and rural regions indicated some diseases hypertension, heart problems, Diabetes, Arthritis, Asthma, Tuberculosis were found in both regions but were prominent in urban region of Rawal Pindi (Goosby, 2013). Goosby identified the risk factors of the cardiovascular diseases in adolescences is loneliness with some other factors (Peplu & Perlman, 1982).

Loneliness is one an effective predictor of Coronary heart diseases among adolescences.<sup>10</sup> Loneliness is explained as a state of mind in which one person expresses social isolation and aloneness (Rokach, 2011). Rokach explained three prominent features of aloneness experiences. These are very painful, distressing and individualistic feelings (Lunsdat, 2016). Those people feel alone are often self centered and have less empathy feeling for others. They possess fears of rejection thus feel alone (Young, 1982 & Alpass & Neville, 2003). Persistent loneliness occur when ever long time individual is not able to develop satisfying relationships with others.<sup>15,16</sup> urbanization is the high risk factor of CAD in south Asian developing countries and as well in pakistan (Dykastra et al., 2005; Erakson et al., 1999 & Milligan et al., 1995). Coronary heart disease double in females globally and in china and Russia male CDA ratio higher in Pakistani female (Seronsen & Wang, 2009 & Ahmed & Bhopal, 2005).

### Methodology

There used research design was cross sectional comparative for data collection purpose from two sets of the population one was of 100 normal adolescences and second was of 100 Coronary artery heart disease facing participants. Moreover 50(25%) male and female adolescences were taken to two different urban and rural regional settings. 50(25%) CAD patients were belonged to urban area and non CAD patients adolescences 50(25%) were belonged to rural area. An inclusion criterion was that, age range for selected adolescences was 10 - 19 years. CAD patients must be indoor patients and suffering from CAD problem more than 6<sup>th</sup> month and participants had taken purposefully to clinics of Haripur and non CAD participants' accessed conveniently from residential urban and rural areas. Coronary artery heart disease prevalence 19.5 % in adolescences, due to un healthy life style, urbanization and psychological diseases (Bunker et al., 2003). the sample equally had taken to both regions and genders for making comparison of loneliness among CAD and non CAD adolescences.

Included institutes were district headquarter hospital Haripur Yahiya well fare hospital of Haripur, Sadia hospital Haripur, Noor surgical Haripur and Allama Iqbal hospital Haripur for collecting data to Coronary artery heart disease patients. Non CAD participants were accessed to district Haripur urban and rural residential areas. The university of loss angles loneliness (UCLA) Urdu scale was used for measuring loneliness. This was consisted on twenty items, 19 number of item was excluded during the translation and adaptation procedure of the scale in Pakistan by Nighat Gul because this was not adopted with our culture and norms. This was a reliable tool for measuring subject matter of the study, it's reliability was observed high .906 it's presented in table-1 (Gul, 2015).

### Results

Table 1

Alpha Reliability Coefficients of UCLA Loneliness Scales for Coronary artery Heart Disease Adolescences and Non Coronary artery Heart Disease Adolescences Population

Source	n	$\alpha$
Loneliness Urdu scale	19	.906



Original Urdu scale	19	.990
English scale	20	.91

Note. N = total numbers of Item, α=Alpha coefficient

Table I presenting the alpha co efficient of UCLA loneliness collected data in present research, original target language urdu and source language English 906, .990 and .91 respectively. This gave evidence of loneliness measuring tool in present research was reliable and authentic.

**Table 2**  
**Mean Scores of UCLA Loneliness Scale among Coronary artery Heart Disease and Non Coronary artery Heart Disease Adolescences**

Variable	CAD patients Adolescences	None CAD patients adolescences	P
	M(SD)	M(SD)	
Loneliness	21.06(6.834)	13.89(6.084)	.000

\*p<.001

Note. \*\*\*p\*\*<.005, P<.001, M = Mean, SD= Stander Deviation, CDA = Coronary artery Heart Disease

Table II shows the mean, stander deviation scores of loneliness of CAD and of normal population on UCLA loneliness scale (M=21.06, SD=6.834) & (M=13.89, SD=6.08) , p<.001 in order that.

**Table 3**  
**Mean Scores for UCLA Loneliness Scale for Coronary Artery Heart Disease and Non Coronary artery Heart Disease Participants Gender Wise**

variable	Male		P	Female		P
	CAD adolescences Patients (n=50)	Non CAD adolescences Patients (n=50)		CAD adolescences Patients (n=50)	Non CAD adolescences Patients (n=50)	
Loneliness	27.89(11.12)	13.89(6.0)	.004	35.00(14.03)	21.06(6.8)	.000

Note. \*\*\*p\*\*<.005, P<.001, M = Mean, SD= Stander Deviation, CDA = Coronary artery Heart Disease

Table III Illustrates of t-test for measuring difference of loneliness in target population among Coronary heart artery disease female & male patients, (M=35.00, SD=14.03) & (M=27.89, SD=11.12), p<.001 respectively. In non-Coronary artery heart diseases male and female adolescences mean sores on UCLA loneliness scale were noticed (M=13.89, SD=6.0) & (M=21.06, SD=6.8, p<.000) respectively.

**Table 4**  
**Mean Scores of UCLA Loneliness Scale among Coronary Artery Heart Disease and Non-Coronary Artery Heart Disease Adolescences Region Wise**

	Urban CAD Adolescences Patients	Non CAD Adolescences Patients	Rural CAD Adolescences Patients	Non CAD Adolescences Patients



variable	M(SD)	M(SD)	P	M(SD)	M(SD)	p
Loneliness	44.30 (8.892)	34.25 (14.19)	.000	30.94(7.759)	29.92(9.821)	.000

Note. \*\* $P < .001$ , M = Mean, SD= Stander Deviation, CDA = Coronary artery Heart Disease

Table IV demonstrated mean scores of UCLA loneliness for adolescences in urban area CAD patients & non CAD patients were (M=38.10, SD=12.602) & (M=24.79, SD=9.21),  $t(244)$ ,  $p < .001$  respectively. In rural area residing CAD patients and non CAD patient's scores were (M=35.00, 14.03) & (21.06, 6.8) in order that.

## Discussion

There is ample evidence loneliness is risk factor of CAD among adolescences CAD patients loneliness level compared with non CAD. CAD patient's symptoms of loneliness were prominent as compare to non CAD. Previous international study yielded the same results that there was loneliness predict high blood pressure, cardio graphic and lower peripheral resistance. Prior research revealed in non-loneliness ambulatory blood pressure, impedance coronary heart diseases lesser total protocol rating (Hameed et al., 1995). In developed countries ratio of stroke coronary heart disease was noticed higher with aloneness. In south Asian countries and Pakistan due to urbanization and materialistic life style loneliness increasing, while indirectly coronary artery heart disease also increasing. In developed countries and commonly globally prevalence of CAD high in aged people, thus latest researches of gulf and south Asia explored coronary artery heart disease increasing in adolescences (Sorensen & Wang, 2009 & Musaiger, 2002). Low occurrence of CHD risk factors among low income participants have been reported for Pakistani adults (Yang et al., 2012). Female level of loneliness was found higher in both health statuses as compare to male. Male less suffered by loneliness with coronary artery heart disease and without coronary artery heart disease. Borys and Perlman explicated the gender effect on loneliness among coronary heart diseases patients and females feeling more alone than males in their study (Huxley et al., 1995; Valtorta et al., 2016 & Kearns et al., 2015). In 2013 CAD was the main reason of death internationally and in 1990 8.24 million deaths occurs from 5.74 million due to CAD in under developed countries incidence rate of over 1 per 1000 (GBD, 2015; McDonald et al., 2005). Approximately 38 million people death occur annually through non communication disease. To 38 million people 70-80% people died in low income countries and Pakistan is facing (50%) non communicational diseases accord to WHO 2014 NCD profile record (Naseem et al., 2016; World Health Organization [WHO], 2016 & Lopez, 2006). Loneliness is explained as a state of mind in which one person expresses social isolation and aloneness. Depression related to gloomy feeling in individuals. Loneliness is aloneness feeling and depression sad feeling. Loneliness is situation if remain prolong, you not share your problems with family and friend lead to CAD disease (Rokach, 2011).

Difference observed in CAD patients and non CAD patient's level of loneliness regional setting wise, urban adolescences in both of health statuses loneliness features was higher than counterpart rural adolescences CAD patients and non CAD patients. Earlier cram also confirmed the results of the concern study feeling of loneliness associated with aspects of home and neighborhood of residence. Occurrence of coronary heart disease (CHD) is globally increasing and increment ratio higher in the urban areas of the under developing countries as well in south Asia and Pakistan (Borys & Perlman, 1985 & WHO, 1999)

## CONCLUSION

Loneliness is risk factor of CAD among adolescences region and gender were aligned risk factors of loneliness and indirectly of CAD. Urban population more suffering by loneliness and coronary artery heart disease than rural. Female are more facing loneliness in urban and ruler areas and their ratio of CAD also greater than male.

## REFERENCES

- 
- [1] Hameed, K., Kadir, M., Gibson, et al. (1995). The frequency of known diabetes, hypertension and ischaemic heart disease in affluent and poor urban populations of Karachi, Pakistan. *Diabetes Medical journal*, 12:500-03.
- [2] Ahmad, N., Bhopal, R. (2005). Is coronary heart disease rising in India? A systematic review based on ECG defined coronary heart disease. *Heart*, 91:719-25.
- [3] Ahmed, A., Chaudhry, A. G, Afzal, M. I, Farooq, H. (2015). Loneliness and diseases prevalence; a gerontological perspective of elder's disease status. *Professional Medical Journal*, 22(3):343-348.
- [4] Alpass, F. M, & Neville, S. (2003). Loneliness and depression in older males. *Journal of Mental Health*. 7: 212-216.
- [5] Barretta, D., Dantzler, D., & Kayson, W. (1995). Factors related to loneliness. *Psychological Report*. 76, 827-830.
- [6] Borys, S, & Perlman, D. (1985). Gender differences in loneliness. *Personality social psychology Journal*, 11: 63-74.
- [7] Bunker, S. J, Colquhoun, D.M, Esler, M. D, Hickie, I. B, Hunt, D. & Jelinek VM. et al. (2003). "Stress" and coronary heart disease: psychosocial risk factors. *Medical journal of Australia*, 178(6):272-6.
- [8] Dykstra, P. A, van Tilburg, T., & De Jong, Gierveld, J. (2005). Changes in older adult Loneliness: Results from a seven-year longitudinal study. *Research on Aging*, 27: 725-747.
- [9] Eriksson, J.G, Forsen T., Tuomilehto, i, et al. (1999). Catch-up growth in childhood and death from coronary heart disease: longitudinal study. *Br. Med. J*, 318:427-31.
- [10] GBD . (2015). Mortality and Causes of Death Collaborators. Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*, 385:117-71.
- [11] Goosby, B. J. (2013). Adolescent loneliness and health in early adulthood. *Journal Sociological Inquiry*, 83(4): 505-536.
- [12] Gul, N. (2015). Translation and Adaptation the Loneliness Scale University of California. *Science international Journal Lahore*, 27(1): 731-732 .
- [13] Huxley, R., Barzi, F., Woodward, M., Excess. (2006). Risk of Fatal Coronary Heart Disease associated with diabetes in Men and Women: Meta Analysis of 37 Prospective Cohort Studies. *British Medical journal*, 332:73-8.
- [14] Kearns, A., Whitley, E., Tannahill, C., & Ellaway. (2015). A lonesome town? Is loneliness associated with the residential environment, including housing and neighborhood factors? [http://doi: 10.1002/jcop.21711](http://doi:10.1002/jcop.21711)
- [15] Lopez, A.D, Mathers, C.D, Ezzati, M, Jamison, D.T, Murray, C.J. (2006). Global and regional burden of disease and risk factors 2001. *Systematic analysis of population health data. Lancet*, 367(9524): 1747-57.
- [16] Louise, C., Hawkley C. L, Burleson, H. M, Besrtson G.G, & Cacioppo T. J. (2003). Loneliness in everyday life: Cardiovascular activity, Psychosocial context and health behaviors. *Journal of Personality and Social Psychology*, 85(1): 105-120.
- [17] Lunstad, J. H. (2016). Timothy B & smith. Loneliness and social isolation as risk factors for CVD: implications for evidence-based patient care and scientific inquiry. *Heart*, 102(1).
- [18] McDonald, M., Brown, A., Noonan, S., Carapetis, J. R. (2005). Preventing recurrent rheumatic fever: the role of register based programmes. *Heart*, 91(9):1131-3.
- [19] Milligan, R. A, Thompson, C., Vandongen, R., et al. (1995). Clustering of cardiovascular risk factors in Australian adolescents: association with dietary excesses and deficiencies. *J.Cardiovasc.Risk*, 2 515-23.
- [20] Murphy, P. M, Kupshik, G. A. (1992). *Loneliness, stress and well-being; a helper's guide* . loneliness health. London; New York: Routledge. 1: e19-18.
- [21] MUSAIGER, A.O. (2002). Diet and prevention of coronary heart disease in the Arab Middle East countries. *Medical Principles and Practice*, 11:9-16.

- 
- [22] Naseem, S., Khattak, U.K, Ghazanfar, H, Irfan, A. (2016). Prevalence of non-communicable diseases and their risk factors at a semi-urban community, *Pakistan. The pan African Medical journal*, 23:151.
- [23] Nekouei, K. Z, Neshatdoost, H., Yousefy, A. Sadeqhi M & Manshaee G. (2013). Psychological factors and coronary heart disease. *ARYA Atheroscler*, 9(1): 102-111.
- [24] Peplau, L. & Perlman, D. (1982) Perspectives on loneliness. In: Peplau L, Perlman D, (Eds). *Loneliness: A sourcebook of current theory, research, and therapy*. New York: Wiley; 1: e 12-13.
- [25] Rokach, A. (2011). From loneliness to belonging. *A review. Psychology Journal*, 8, 70-81.
- [26] Rook, Donaldson & Watson. (2010). Integrated review of personality. *Social Psychology*, 5: 239-264.
- [27] Sorensen, E. A & Wang, F. (2009). Social support, depression, functional status, and gender differences in older adults undergoing first-time coronary artery bypass graft surgery. *Heart Lung*, 38(4):306-17
- [28] Valtorta, N.K, Kanaan, Gilbody, S., Ronzi, S & Hanratty, B. (2016). Loneliness and social isolation as risk factors for coronary heart disease and stroke: systematic review and meta-analysis of longitudinal observational studies. *Heart*, 102(13):1009-16.
- [29] World Health Organization . (1999). *World Health Report 1999, making a difference*. Geneva, World Health Organization.
- [30] World Health Organization. (2015). *Non-communicable diseases country profiles 2014. Pakistan*. Geneva, Switzerland: World Health Organization. Retrieved from February 1<sup>st</sup>,.2015
- [31] Xia, N, Li H. (2018). Loneliness, Social Isolation, and Cardiovascular Health. *Antioxid Redox signal*, 28(9): 837-851.
- [32] Yang, Z. J., Liu, J., Ge, J.P., Chen, L., Zhao, Z.G., Yang, W.Y. (2012). Prevalence of cardiovascular disease risk factor in the Chinese population: the 2007-2008 China National Diabetes and Metabolic Disorders Study. *Eurpion Heart Journal* , 33:213-20.
- [33] Young, J. E. (1982). Loneliness, Depression and Cognitive Therapy: Theory and Application. In L. A. Peplau, & D. Perlman (Eds.), *Loneliness: A Sourcebook of Current Theory, Research and Therapy*. New York: Wiley; 1: e1-18.
- [34] Yusuf, S., Reddy, S., Ôunpuu, S., Anand, S. (2001). Global burden of cardiovascular diseases Part II: Variations in cardiovascular disease by specific ethnic groups and geographic regions and prevention strategies. *Circulation*, 104:2855-64.